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Salvadoran Consumption of Ethnic Foods in the United States

S. Patricia Batres-Marquez, Helen H. Jensen, and Gary W. Brester

The U.S. Salvadoran population is the largest group of Central and South American people living in the United States today. This study investigates the U.S. market for thirty Salvadoran foods and the demographic characteristics and attitudes of Salvadorans toward these foods. Original data were obtained from a survey conducted through personal interviews of Salvadoran residents of Los Angeles, California and Houston, Texas. Salvadorans surveyed were predominantly low income, without a high school degree, and living in large families. The Salvadoran foods consumed by most respondents were tortilla flour, red beans, *loroco* (a vegetable), *semita* (a sweet bread), *queso duro* (a hard cheese) and *horchata* (a cold drink). Four groups of households were determined by using cluster analysis. The results indicate that a potential market exists in the United States for most of the Salvadoran products included in this study, and that Salvadorans would like to buy other foods such as fresh fruits and vegetables.

The 2000 U.S. Census identified 35.3 million Hispanics living in the United States, representing 12.5 percent of the total population (U.S. Bureau of the Census 2001a). Hispanics comprise the fastest-growing group of the U.S. population—a 57.9-percent increase since the last census—and may soon surpass the African-American population as America's largest minority segment. Among the Hispanic population, the Salvadoran community has been increasing in recent years. The 2000 Census indicated that there were 655,165 Salvadorans—the largest group among Central and South American people—living in the United States. According to the latest census, 50 percent of the Hispanic population lived in just two states: 31.1 percent in California and 18.9 percent in Texas (U.S. Bureau of the Census 2001a). The majority of Hispanics lived in central cities of metropolitan areas, and the largest number of people from Central America lived in Los Angeles, New York, Houston, Miami, and San Francisco (U.S. Bureau of the Census 2001a).

Investigating the effect of ethnicity on food expenditures is important to meet the needs of ethnic consumers and to improve understanding of factors that affect consumer behavior and demand. Hispanics have become increasingly important in

both their proportion of the population and their share of total consumer expenditures (Paulin 1998). Several recent studies recognize the role of Hispanic ethnicity in markets, including some studies that focus on attitudes of Hispanics in markets (Koslow, Shamdasani, and Touchstone 1994). However, only a few economic studies examine the expenditure patterns of Hispanics (Wagner and Soberon-Ferrer 1990; Paulin 1998; Fan and Solis Zuiker 1998). Very little information is available on consumption of or expenditures on ethnic foods that Hispanics or subgroups within this community consume.

People from different cultures and demographic groups to some extent express their differences through the foods they eat (Senauer, Asp, and Kinsey 1991). This study investigates the demand for 30 of the most popular Salvadoran foods. With the exception of processed vegetables and fruits, most of the foods included are also consumed by other Hispanic groups, particularly by those from Mexico and Central America. However, as reported by Romero-Gwynn and Gwynn (1997), the preparation methods and incorporation of the foods into the meal patterns vary among groups.

The study also investigates the demographic characteristics and attitudes of Salvadoran people toward these traditional and imported foods.

Survey Design, Data Collection, and Survey Instrument

The 1994 survey of Salvadoran people living in Los Angeles and Houston was designed to obtain market information regarding selected Salvadoran

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foods, the demographic characteristics of Salvadoran households, and Salvadoran consumer attitudes toward Salvadoran foods. We selected the sample for the study from adult Salvadoran people living in Los Angeles and Houston. The Salvadoran Consulates in Los Angeles and Houston provided a list of Salvadoran organizations from which we identified potential respondents. Courier offices, such as Gigante Express in Los Angeles and Houston and El Cairo Express and Envios Urgentes in Houston, also provided some information.

During the last week of July and the first week of August 1994 we obtained 207 questionnaires from U.S.-resident Salvadorans through personal interviews in community businesses, centers, and organizations. The interviews were conducted in Spanish by one of the authors of this paper who is a native Spanish-speaker and familiar with Salvadoran food and culture. In Los Angeles, personal interviews were conducted at the Salvadoran organization "Chalchuapanecos en Los Angeles" and Gigante Express's office. We obtained a total of 94 questionnaires from the two locations. The Salvadoran Chamber of Commerce in Los Angeles administered six questionnaires by mail. Thus we acquired 100 completed questionnaires from the Los Angeles area.

In Houston we obtained 107 questionnaires via personal interview. We interviewed 60 respondents at Gigante Express's office, 10 at Envios Urgentes's office, and 37 at two meetings of Salvadoran organizations in Houston.

The survey instrument consisted of 18 questions and contained three sections: demographics, markets, and Salvadoran food attitudes. The demographic section included factors such as gender, age, number of people per household, number of children in the family, education, employment, annual income, and length of residence in the United States. (The survey instrument is available from the authors.)

The market section included questions regarding consumption and sources of Salvadoran foods, prevailing market prices, household willingness to pay, desired quantities if Salvadoran products were available in the market, and expenditures on several food groups. The Appendix contains a description of the 30 Salvadoran foods included in this study.

The last part of the survey instrument considered the following aspects of U.S.-resident Salva-

doran food consumption: reasons for not consuming Salvadoran foods, importance of authenticity of this type of food, other products respondents would like to buy, and expenditures on items brought from El Salvador to the United States by the respondents.

We used all 100 personal interviews obtained in Los Angeles in the analysis. For the Houston sample we eliminated 4 of the 107 personal interviews conducted because of the respondents' failure to answer a majority of the questions. Therefore the total number of observations was 203.

Characteristics of the Sample

An overview of the demographic characteristics of the households from Los Angeles and Houston is presented in Table 1. The combined sample contained both male (44.8 percent) and female (52.7 percent) participants. Respondents ranged in age from 18 years to over 58 years, with a mean age of 34 years. The average number of household members was four; household size ranged from 1 to 11 people. The Houston sample included a relatively higher proportion of males (50.5 percent) and the mean age of respondents was lower (32 years). The majority of the respondents (63.5 percent) reported having children living at home; the distribution of children across age groups was fairly dispersed.

The respondents' characteristics of education, employment status, and income are presented in Table 2. A large proportion of those interviewed had not received a high school diploma (44.3 percent); 41.4 percent were high school graduates. The proportion of respondents with less than a high school diploma was higher in Los Angeles (53.0 percent) than in Houston (35.9 percent). The results from our survey indicate that over half of the sample had an annual household income of \$19,999 or less; 20 percent of respondents in Los Angeles reported annual household income below \$10,000. Nearly 40 percent of households had five or more family members.

A relatively high proportion of adults in the households worked outside the home. A majority of respondents (69.0 percent) reported having a mother working outside the home, and the average number of household members earning a salary was two.

Other results show that length of residence in the United States varied from 1 year to more than

10 years, with the highest proportion of the respondents in the 1- to 5-year category. The proportion of respondents living in the United States for between 6 and 10 years and for more than 10 years was higher in Houston than in Los Angeles.

By comparing the demographic characteristics of our sample with those of the Hispanic population at the national level, we found that the Salvadoran population seems similar to the Hispanic population in general, although the Salvadoran households are a bit poorer and have more family members per household. The Hispanic population on average is younger, has lower income, is less educated, and resides in larger households than is

typical for the U.S. population (U.S. Bureau of Census 2001b). Even though high school completion rates for the Hispanic population have improved in recent decades there is still a large proportion (43.0 percent) of Hispanics age 25 and over with less than a high school education (U.S. Bureau of the Census 2001b). In addition, the Hispanic population is relatively poor; 31.0 percent of all Hispanics in the United States lived below the poverty level in 1994 (\$15,141 for a family of four) (U.S. Bureau of Census 1997; 2000). In 1994 the Census found that 27.6 percent of Central and South American households had five or more people (U.S. Bureau of the Census 1998).

Table 1. Gender, Age, and Household Composition of Salvadorans Living in Los Angeles And Houston, 1994 (%).

Demographic Characteristic	Whole Sample N= 203	Los Angeles Sample N= 100	Houston Sample N= 103
Gender			
Male	44.8	39.0	50.5
Female	52.7	59.0	46.7
No response	2.5	2.0	2.9
Age			
18–27 years	23.6	21.0	26.2
28–37 years	43.8	42.0	45.6
38–47 years	20.2	20.0	20.4
48–57 years	7.0	13.0	1.0
58 years and older	1.0	0.0	1.9
No response	4.4	4.0	4.9
Number of people in the household			
1 person	3.0	3.0	2.9
2 people	12.8	10.0	15.5
3 people	17.0	18.0	17.5
4 people	24.6	28.0	21.4
5–6 people	26.5	25.0	28.2
7–11 people	12.4	12.0	12.6
No response	3.0	4.0	1.9
Children			
No children living in the household	31.0	29.0	33.0
Households with children	63.5	67.0	60.2
No response	5.4	4.0	6.8
Reporting children by age			
Less than 3 years	31.1	36.0	26.2
Between 3 and 10 years	34.9	34.0	35.8
Between 11 and 15 years	23.1	25.0	21.5

Note: Percentages may not sum to 100 due to rounding.

Table 2. Education, Employment, Income, and Time Residing in the United States for Salvadoran Household Members, 1994 (%).

Demographic Characteristic	Whole Sample N = 203	Los Angeles Sample N = 100	Houston Sample N = 103
Educational achievement			
Less than high school	44.3	53.0	35.9
High school graduate	41.4	35.0	47.9
Some college	6.4	3.0	9.7
Complete college	0.5	1.0	0.0
Graduate education	0.0	0.0	0.0
No response	7.4	8.0	6.8
Households with a mother working outside the home			
Yes	69.0	70.0	68.0
No	26.1	23.0	29.1
No response	4.9	7.0	2.9
Number of household members earning a salary			
1 person	14.3	17.0	11.7
2 people	42.9	43.0	42.7
3 people	19.7	21.0	18.4
4 people	11.8	8.0	15.5
5–7 people	8.3	8.0	8.8
No response	3.0	3.0	2.9
Approximate annual household income			
Less than \$10,000	13.3	20.0	6.8
\$10,000–\$19,999	38.4	38.0	38.8
\$20,000–\$29,999	25.1	21.0	29.1
\$30,000–\$39,000	5.4	6.0	4.9
\$40,000 and over	3.0	4.0	2.0
No response	14.8	11.0	18.4
The respondent's time living in the U.S.			
Less than 1 year	3.0	5.0	1.1
1 to 5 years	39.4	43.0	35.9
6 to 10 years	27.1	24.0	30.1
More than 10 years	24.1	21.0	27.2
No response	6.4	7.0	5.8

Note: Percentages may not sum to 100 due to rounding.

Market Characteristics of the Sample

Typically, Salvadorans in Los Angeles and Houston consumed Salvadoran foods during the year previous to the interview. In Los Angeles we visited a Salvadoran bakery and a Hispanic grocery store which had a large variety of Salvadoran food products. Many of the respondents purchased some of the Salvadoran foods included in this study from

these two stores. In contrast, Houston had a chain of Hispanic-international supermarkets. We visited the supermarket where many of the respondents purchased Salvadoran foods and found that the supply of these foods, particularly vegetables and fruits, was limited compared to that in the Los Angeles supermarket. We could not find Salvadoran bakeries in Houston, but there were other Hispanic bakeries—in particular Mexican bakeries—where

some of the respondents purchased bread and candy. These products are not the same as Salvadoran bread and candy but are similar.

Description of the Products Included in the Study

A listing of products identified specifically in the interview questionnaire appears in the Appendix. Corn and bean products are considered essential to the traditional Salvadoran diet. Tortilla flour is used for cooking in the home and requires minimum preparation and cooking time. *Tamal enlatado* (canned tamale) is a ready-to-eat food. Dry bean products have to be cooked at home, and red and white beans in particular require a long cooking time.

Processed vegetables and fruits are used for cooking some of the traditional Salvadoran dishes in the home. All products included in this group except one are vegetables, and most of these products are available only in pickled or frozen form because they are perishable. Bread and candy products are ready-to-eat foods. Most Salvadorans prefer to buy these products instead of cooking them at home because they require a fair amount of preparation and cooking time. Cheese products are good complementary foods for many of the Salvadoran dishes, and cheeses are frequently used as ingredients in preparation of some traditional dishes. Salvadoran beverages are sold as drink mixes, with the exception of *atol de elote* (a hot corn drink). These are packaged convenience foods. *Horchata* and *cebada* do not require any additional cooking.

Tables 3 and 4 show the percentage of households that consumed Salvadoran foods in the past year and the amount of these foods consumed in a typical week. Among corn products, tortilla flour was the most popular. Sixty percent of the sample participants reported that their household consumed an average of 4.72 pounds in a typical week.

Among bean products, red beans were the product consumed during the previous year by the largest proportion of respondents. The average consumption of red beans was 3.03 pounds per week. The proportion of households that did not consume processed vegetables and fruits was higher than the proportion that did. Of the processed vegetables and fruits, *loroco* was the product that most respondents consumed; about 40 percent of the whole sample reported having consumed it.

In the bread and candy category, *semita* and *quesadilla de queso* were identified by the largest proportion of respondents; nearly 65 percent of the sample participants reported having consumed these products. The average consumption in a typical week was 1.84 packages of *semita* and 2.09 packages of *quesadilla de queso*. A relatively high percentage of respondents reported consumption of cheese products. Most households (84.2 percent) consumed *queso duro*, at an average rate of 2.08 pounds per week. The next most popular cheese was *queso duro-blando* with households consuming an average 1.60 pounds per week. *Horchata* was the beverage product consumed by the largest number of respondents.

In general, the proportion of households that consumed Salvadoran foods was higher in Los Angeles than in Houston. The exceptions were for corn tortilla flour, *tamal enlatado*, canned beans, *dulce de mazapan*, and *cebada*.

Willingness to Purchase Ethnic Foods

Table 5 provides an overview of quantities that households would be willing to buy if the products were produced in El Salvador and made available in the U.S. market. The last column of this table summarizes the percentage of households who would buy each of the Salvadoran foods. A comparison between the reported percentage of households willing to buy the products if they were available (Table 5) and the percentage of respondents who purchased the products (Table 3, first column) indicates a potential in the market: more households would buy these products if they were produced in El Salvador and made available in the U.S. market. The average quantities per week that households would buy are generally similar to the quantities that they consumed during the past year (Table 4).

Expenditures

Household expenditure on food consumption in a typical week in 1994 is presented in Table 6. The average weekly household expenditure on meat products was \$35.21 for the whole sample; this was the highest expenditure among the food products and represented 31.39 percent of the average total food expenditure. The next largest food-expenditure category was fruits and vegetables, represent-

Table 3. Percentage of Households that Consumed Salvadoran Foods in the Past Year, 1994 (%).

Demographic Characteristic	Whole Sample N= 203	Los Angeles Sample N = 100	Houston Sample N = 103
Corn products			
Tortilla flour	60.1	56.0	64.1
Tamal enlatado	4.4	4.0	4.9
Bean products			
Red beans	88.7	89.0	88.3
Canned beans	29.1	28.0	30.1
White beans	31.5	33.0	30.1
Processed vegetables and fruits			
Loroco	39.9	55.0	25.2
Chipilin	23.1	30.0	16.5
Hoja de mora	12.8	17.0	8.7
Verdolaga	14.8	19.0	10.7
Flor de izote	30.5	46.0	15.5
Pito	21.7	33.0	10.7
Semilla paterna	15.3	20.0	10.7
Bread and candy			
Semita	65.5	80.0	51.5
Quesadilla de queso	64.0	75.0	53.4
Torta de yema	28.1	39.0	17.5
Salpor	26.6	35.0	18.4
Dulce de mazapan	9.3	8.0	10.7
Quiebra dientes	12.3	14.0	10.7
Conserva de coco	37.4	48.0	27.2
Dulce de panela	28.1	38.0	18.4
Cheese			
Queso duro	84.2	88.0	80.6
Queso duro-blando	50.2	55.0	45.6
Queso capita	35.0	47.0	23.3
Queso morolique	18.7	20.0	17.5
Quesillo (achiclado)	26.6	31.0	22.3
Beverages			
Horchata	75.4	77.0	73.8
Cebada	29.1	28.0	30.1
Chilate	30.0	41.0	19.4
Atol chuco	30.5	40.0	21.4
Atol de elote	24.1	34.0	14.6

Note: Percentages may not sum to 100 due to rounding.

Table 4. Amount of Salvadoran Foods Consumed by Households in a Typical Week, 1994.

Type of Food	Whole Sample (N = 203)		Los Angeles Sample (N = 100)		Houston Sample (N = 103)	
	Mean of all households	Mean of all households that consumed	Mean of all households	Mean of all households that consumed	Mean of all households	Mean of all households that consumed
Corn products						
Tortilla flour (lb)	2.77	4.72	2.57	4.70	2.96	4.73
Tamal enlatado (cans)	0.09	2.87	0.09	2.06	0.09	4.50
Bean products						
Red beans (lb)	2.68	3.03	2.89	3.23	2.48	2.83
Canned beans (cans)	0.67	2.54	0.38	1.60	0.93	3.29
White beans (lb)	0.51	1.69	0.53	1.59	0.50	1.79
Processed vegetables and fruits						
Loroco (lb)	0.54	1.42	0.73	1.31	0.34	1.74
Chipilin (lb)	0.22	1.10	0.32	1.10	0.13	1.13
Hoja de mora (lb)	0.11	1.02	0.17	1.03	0.05	1.00
Verdolaga (lb)	0.15	1.10	0.19	1.04	0.10	1.25
Flor de izote (lb)	0.40	1.43	0.65	1.50	0.16	1.33
Pito (lb)	0.23	1.28	0.40	1.30	0.07	1.17
Semilla paterna (lb)	0.17	1.39	0.23	1.26	0.12	1.71
Bread and candy						
Semita (pkg)	1.18	1.84	1.54	1.91	0.84	1.73
Quesadilla de queso (pkg)	1.31	2.09	1.60	2.13	1.03	2.02
Torta de yema (pkg)	0.37	1.48	0.48	1.32	0.28	1.83
Salpor (lb)	0.32	1.29	0.44	1.28	0.21	1.31
Dulce de mazapan (lb)	0.11	1.37	0.11	1.31	0.12	1.44
Quiebra dientes (lb)	0.18	1.62	0.18	1.42	0.17	1.89
Conserva de coco (lb)	0.35	0.99	0.46	0.97	0.25	1.04
Dulce de panela (lb)	0.36	1.34	0.54	1.42	0.19	1.17
Cheese						
Queso duro (lb)	1.74	2.08	1.99	2.25	1.48	1.88
Queso duro-blando (lb)	0.77	1.60	0.96	1.66	0.59	1.50
Queso capita (lb)	0.55	1.72	0.87	1.90	0.24	1.28
Queso morolique (lb)	0.24	1.50	0.31	1.64	0.16	1.29
Quesillo (achiclado) (lb)	0.51	2.10	0.75	2.50	0.27	1.47
Beverages						
Horchata (lb)	1.08	1.46	1.21	1.57	0.94	1.34
Cebada (lb)	0.34	1.38	0.32	1.23	0.36	1.53
Chilate (lb)	0.34	1.25	0.50	1.26	0.19	1.25
Atol chuco (lb)	0.35	1.27	0.49	1.28	0.23	1.26
Atol de elote (lb)	0.26	1.41	0.41	1.38	0.13	1.56

Table 5. Quantities that Households Would Buy if Products Were Available in the Market.

Type of Food	Average Quantity (Per week)	Percent Who Responded (%)	Households Who Would Buy (%)
Corn products			
Tortilla flour	5.24 lb	63.5	76.0
Tamal enlatado	1.00 can	61.1	2.4
Bean products			
Red beans	3.60 lb	64.5	90.8
Canned beans	2.68 can	62	31.0
White beans	1.87 lb	61.1	41.1
Processed vegetables and fruits			
Loroco	1.85 lb	64	80.8
Chipilin	1.55 lb	63.5	72.9
Hoja de mora	1.52 lb	62.1	55.6
Verdolaga	1.54 lb	62.1	49.2
Flor de izote	1.88 lb	62.6	72.4
Pito	1.65 lb	62.6	71.7
Semilla paterna	2.04 lb	63	68.8
Bread and candy			
Semita	2.00 pkg	64.5	88.5
Quesadilla de queso	2.17 pkg	64	86.9
Torta de yema	1.56 pkg	62.3	55.9
Salpor	1.56 lb	62.1	47.6
Dulce de mazapan	1.36 lb	61.6	29.6
Quiebra dientes	1.62 lb	61.6	34.4
Conserva de coco	1.69 lb	62.1	54.0
Dulce de panela	1.56 lb	62.1	47.6
Cheese products			
Queso duro	2.16 lb	65.5	93.2
Queso duro-blando	1.78 lb	63.1	64.1
Queso capita	1.76 lb	62.1	50.0
Queso morolique	1.43 lb	62.6	30.7
Quesillo (achiclado)	1.79 lb	62.1	38.1
Beverages			
Horchata	1.70 lb	64.5	86.3
Cebada	1.55 lb	63.1	53.1
Chilate	1.57 lb	62.1	49.2
Atol chuco	1.57 lb	62.6	52.8
Atol de elote	1.46 lb	61.6	20.8

Note: Average quantity was calculated for the number of households that would consume an item. Percentage of households who would buy an item was estimated based on the number of sample participants who answered this question.

Table 6. Household Expenditure on Food Groups in a Typical Week, 1994 (\$).

Food Category	Whole Sample (<i>N</i> = 203)		Los Angeles Sample (<i>N</i> = 100)		Houston Sample (<i>N</i> = 103)	
	<i>N</i>	(%)	<i>N</i>	(%)	<i>N</i>	(%)
Meat (beef, pork, poultry, and fish)	35.21	31.39	35.57	33.66	34.88	29.56
Cereals and bread	18.08	16.12	17.66	16.71	18.46	15.64
Dairy products	16.94	15.10	16.09	15.23	17.70	15.00
Fruits and vegetables	20.94	18.67	18.06	17.09	23.55	19.96
Beverages	12.53	11.17	9.23	8.73	15.53	13.16
Other foods	8.46	7.54	9.06	8.57	7.89	6.69
Total	112.16	100.0	105.67	100.0	118.01	100.0

ing 18.67 percent of the average food expenditure. Both the Los Angeles and Houston samples followed similar patterns.

The reported survey results on expenditures can be compared to data from the 1994 Consumer Expenditure Survey (CES) (U.S. Bureau of Labor Statistics 2002). The 1994 CES shows Hispanic households reported an average weekly food-at-home expenditure of \$63.88, which was nearly 25 percent higher than the amount reported for all other U.S. consumers. The average Hispanic household size was 3.4 persons, compared to 2.5 for non-Hispanics in this national survey. The reported share of at-home food expenditures for meats, poultry, fish, and eggs was 30.95 percent for Hispanics, compared to 26.62 percent for other consumers. Hispanics spent a greater share of their income (17.1 percent) on fruits and vegetables than did other U.S. consumers (16.0 percent). Hispanics spent about the same share of their incomes on dairy products as did other U.S. consumers.

The shares reported in our survey of Salvadorans are very similar to those of the Hispanic population in general, with relatively high shares of meats, poultry, fish, and eggs, and fruits and vegetables. The Salvadoran data show a larger share of expenditures on dairy products, due perhaps to the popularity of the cheeses.

Cluster Analysis

We used cluster analysis to classify types of Salvadoran consumers. This method separates respondents (households) into different groups based on their food-consumption patterns. After forming the

groups we evaluated the demographic characteristics of each cluster to uncover any associations with food-consumption patterns.

Clustering in this study involved grouping entities (households) into subsets or homogeneous subgroups based on their patterns of food consumption of specific ethnic (Salvadoran) foods. More specifically, we segregated households into several groups based on the amount consumed of the 30 Salvadoran foods identified in this study. We used the FASTCLUS procedure of the SAS statistical-analysis computer package (SAS Institute 1985) as our cluster algorithm.

Most clustering techniques are sensitive to outliers, and removal of outliers previous to performing a cluster analysis is recommended (Everitt 1976; Afifi and Clark 1990). To determine the presence of outliers in our data, we ran a FASTCLUS procedure, setting the number of clusters equal to 20. We considered resulting clusters containing one or two observations as outliers. We removed these low-frequency clusters and then ran the FASTCLUS procedure again, selecting the seeds from the high-frequency clusters in the previous analysis. We performed a final FASTCLUS procedure with outliers assigned to specific clusters.

Using cluster analysis we determined four groups or clusters. Based on the type of Salvadoran foods consumed by the members in each cluster we identified the clusters as: Cluster 1 (traditional foods with cheeses); Cluster 2 (specialty foods); Cluster 3 (traditional foods with beans and vegetables); and Cluster 4 (occasional shoppers). The number of households in each cluster ranged from 3 to 112. After determining the clusters, we exam-

ined characteristics of households in each cluster, including the average consumption of the 30 Salvadoran foods per cluster as well as demographic characteristics (household size, annual household income, number of children per household, percentage of households in the Los Angeles and Houston samples, and reasons for not consuming Salvadoran foods).

Table 7 presents the average quantity of 30 Salvadoran foods consumed by the households in a typical week for each cluster. Cluster 4 (occasional shoppers), the largest group, consists of 112 households. Members in this group, on average, consumed relatively small amounts of all food categories (with the exception of corn products) compared with respondents in the other clusters. For most products, the proportion of consuming households in this cluster was less than 25 percent. Most indicated that they did not find the products in the market. Others reported that Salvadoran foods were too expensive or that the quality of the foods was poor. Fifty-seven percent of the households in this cluster lived in Houston.

Cluster 1 (consuming traditional foods and cheeses) consists of 37 households who, in general, consumed high amounts of corn tortilla flour and moderate to high amounts of bean products. These two products are considered traditional foods in the Salvadoran diet. They also consumed moderate to high amounts of Salvadoran bread and candy, moderate amounts of processed vegetables and fruits, and low amounts of beverages. Relative to the other cluster with traditional fare (Cluster 3), they consumed more cheeses. Half of the households in Cluster 1 pointed out that they did not consume Salvadoran foods because the products were not available in the market; they also indicated that products were of poor quality or too expensive (Table 8). Nearly three-fourths of this cluster lived in Los Angeles. Availability of Salvadoran bread in Los Angeles may have contributed to the higher consumption of bread and candy by members of this cluster. In general, Clusters 4 and 1 showed similar demographic characteristics, with the exception of city location (see Table 8).

Cluster 4 (occasional shoppers) and Cluster 1 (traditional with cheese) were typified by households with several children, lower income, and larger household size. The majority of the households in these clusters had more than one child, and

the children were likely to be between 3 and 10 years and between 11 and 15 years. The highest proportion of the members (households) in these clusters earned between \$10,000 and \$19,999. Clusters 1 and 2 had fewer households in the higher-income groups, and these two clusters included more of the larger households (e.g., eight or more people).

Cluster 2 (specialty foods) includes six households who consumed high quantities of cheese and beverages, moderate to high quantities of bean products, and low quantities of corn products and processed vegetables and fruits. Two-thirds of the members in this cluster reported that they did not consume Salvadoran foods because they thought that products in the market were too expensive; again, other important reasons were that products were not available in the market or were of poor quality (Table 8). Households with preschool-age or older children, smaller households, and somewhat higher incomes typified this cluster. Half of the households in Cluster 2 had children, especially preschoolers and children between the ages of 11 and 15. The number of people in these households ranged from one to seven, and the majority were located in the Los Angeles area. One-half of the households in this cluster earned salaries in the \$10,000–\$19,999 range. The remaining 50 percent of the households earned between \$20,000 and \$39,999. The combination some members earning low incomes and others earning relatively high incomes affected the types and quantities of Salvadoran foods consumed within this cluster. Households included in this cluster ate moderate to large amounts of staple foods (bean products) as well as more expensive specialty, ready-to-eat foods (e.g., cheese products) and packaged convenience foods (e.g., beverages).

Cluster 3 (traditional foods with beans and vegetables) was the smallest group, with only three households. Their consumption included large amounts of corn and bean products, large amounts of processed vegetables and fruits, and moderate amounts of cheese and beverages. This cluster included the largest share of low-income households. Most of the households earned less than \$10,000 annually. Households in this group were located in the Los Angeles area. The consumption patterns of households in this cluster related to the low income earned by households in this group: they consumed large amounts of staple foods (e.g., corn and bean

Table 7. Mean Consumption by Salvadoran Households, by Cluster.

Variable	Cluster			
	1 (N = 37)	2 (N = 6)	3 (N = 3)	4 (N = 112)
Corn products				
Tortilla flour	3.53 lb	1.83 lb	3.66 lb	2.67 lb
Tamal enlatado	0.16 can	0.00	0.66 can	0.06 can
Bean products				
Red beans	3.97 lb	4.00 lb	4.67 lb	2.11 lb
Canned beans	0.51 can	1.50 can	0.50 can	0.54 can
White beans	0.58 lb	0.83 lb	2.33 lb	0.29 lb
Processed vegetables and fruits				
Loroco	0.81 lb	2.00 lb	1.33 lb	0.37 lb
Chipilin	0.68 lb	0.00	0.66 lb	0.08 lb
Hoja de mora	0.28 lb	0.00	1.00 lb	0.03 lb
Verdolaga	0.50 lb	0.00	0.00	0.05 lb
Flor de izote	1.28 lb	0.21 lb	1.33 lb	0.18 lb
Pito	0.70 lb	0.04 lb	2.33 lb	0.05 lb
Semilla paterna	0.26 lb	0.04 lb	3.00 lb	0.04 lb
Bread and candy				
Semita	1.90 pkg	1.33 pkg	1.67 pkg	0.97 pkg
Quesadilla de queso	2.36 pkg	4.50 pkg	2.33 pkg	0.89 pkg
Torta de yema	1.23 pkg	0.17 pkg	0.66 pkg	0.15 pkg
Salpor	0.99 lb	0.50 lb	0.17 lb	0.12 lb
Dulce de mazapan	0.45 lb	0.17 lb	0.33 lb	0.02 lb
Quiebra dientes	0.54 lb	1.58 lb	0.67 lb	0.01 lb
Conserva de coco	0.75 lb	1.08 lb	1.33 lb	0.18 lb
Dulce de panela	1.06 lb	1.08 lb	1.33 lb	0.13 lb
Cheese				
Queso duro	2.51 lb	3.33 lb	1.33 lb	1.38 lb
Queso duro-blando	1.12 lb	2.33 lb	1.00 lb	0.55 lb
Queso capita	1.08 lb	1.33 lb	1.00 lb	0.31 lb
Queso morolique	0.65 lb	0.33 lb	0.67 lb	0.10 lb
Quesillo (achiclado)	1.46 lb	1.33 lb	0.67 lb	0.22 lb
Beverages				
Horchata	1.51 lb	3.00 lb	2.00 lb	0.87 lb
Cebada	0.47 lb	2.33 lb	1.00 lb	0.16 lb
Chilate	0.75 lb	1.83 lb	1.33 lb	0.12 lb
Atol chuco	0.63 lb	2.17 lb	1.33 lb	0.16 lb
Atol de elote	0.54 lb	1.33 lb	1.33 lb	0.07 lb

Note: Forty-five observations were omitted from the analysis due to missing values.

Table 8. Percentage of Households by Location and Reasons for Not Consuming Salvadoran Foods, per Cluster (%).

Characteristic	Cluster			
	1 (N = 37)	2 (N = 6)	3 (N = 3)	4 (N = 112)
Location				
Los Angeles	75.7	66.7	100.0	42.9
Houston	24.3	33.3	0.0	57.1
Reason for not consuming Salvadoran foods				
Not available in the market	50.0	50.0	50.0	76.6
Too expensive	30.6	66.7	100.0	30.8
Limited supply	19.4	—	100.0	14.0
Poor quality	44.4	50.0	100.0	29.0
No response	2.7	0.0	33.3	4.5

Note: Numbers may be greater than the total number reported due to multiple sources.

products) and vegetables. Again, the main reasons for not consuming Salvadoran foods were that products were too expensive, in limited supply, and of poor quality.

Several differences among the households emerged from this analysis. As would be expected, consumers in the lowest income brackets seemed to eat more staple foods and vegetables, whereas consumers with higher incomes tended to consume more expensive food items, such as Salvadoran cheese. Non-availability of Salvadoran foods in the market and poor quality of products emerged as important reasons for households not consuming Salvadoran foods. In addition, there were different consumption patterns in the two markets, and these differences suggest that the Houston market is less developed than the Los Angeles market.

Potential for Salvadoran Food Market

Many Salvadorans in the U.S. already consume Salvadoran foods. Foods such as tortilla flour and bean products are generic foods that are easily found in traditional supermarkets in Los Angeles and Houston. Many of the survey participants in Los Angeles already consumed authentic Salvadoran bread and candy, as there is at least one Salvadoran bakery in that area. Those in Houston could purchase bread and candy from Hispanic bakeries. These Hispanic bread and candy products, although

not the same as Salvadoran products, are good substitutes. Other products included in this study are found in Hispanic supermarkets in both Los Angeles and Houston. However, as shown in Table 9, a proportion of respondents obtained these foods directly from El Salvador (sent by family members, shipped from companies in El Salvador, or brought back to the U.S. when the respondents traveled to El Salvador). Half of the respondents indicated they obtained cheese products directly from El Salvador. Consumers of processed vegetables and fruits and bread and candy also obtained these products directly from El Salvador, especially in the Houston market.

In addition to the foods included in this survey, a large proportion of respondents expressed a desire to buy fresh Salvadoran fruits and vegetables. Several of the vegetable products listed by the respondents were included in this study; however, respondents indicated a preference for fresh vegetables instead of frozen or pickled. They also mentioned other food products such as *tablilla* (Salvadoran chocolate), instant coffee, and tamale (but not canned). Among the meat, poultry, and seafood products, Salvadoran *chorizo* (sausage) and seafood such as *pescado seco* (dried fish) and *conchas* (shellfish) were the products most often mentioned. Salvadorans have a positive attitude toward their ethnic foods, especially those made in El Salvador. The majority of the respondents (88.7 percent) in-

Table 9. Sources of Salvadoran Foods (%).

	Los Angeles		Houston	
	Direct from El Salvador	Purchased Locally	Direct from El Salvador	Purchased Locally
Corn Products				
Tortilla flour	14.3	85.7	10.6	81.8
Tamal enlatado	0.0	25.0	80.0	0.0
Bean Products				
Red beans	32.5	69.7	16.5	80.2
Canned beans	3.6	85.7	13.0	64.5
White beans	12.2	72.7	22.6	67.7
Processed Vegetables and Fruits				
Loroco	10.9	80.0	34.6	57.7
Chipile	13.3	70.0	35.3	52.8
Hoja de mora	11.8	64.7	33.3	55.6
Verdolaga	5.3	84.2	36.4	63.6
Flor de izote	13.0	73.9	43.8	50.0
Pito	24.3	54.5	45.5	45.5
Semilla paterna	20.0	50.0	27.3	36.4
Bread and Candy				
Semita	18.8	77.5	20.8	71.7
Quesadilla de queso	13.3	76.0	20.0	67.3
Torta de yema	12.8	74.4	33.4	61.1
Salpor	14.3	80.0	36.9	52.6
Dulce de mazapán	25.0	50.0	63.6	36.4
Quiebra dientes	21.4	64.3	63.6	45.4
Conserva de coco	18.7	62.5	32.1	57.1
Dulce de panela	10.6	63.2	36.9	68.4
Cheese				
Queso duro	52.3	55.7	49.4	50.6
Queso duro-blando	45.5	54.5	48.9	42.6
Queso capita	57.4	42.6	50.0	33.3
Queso morolique	65.0	35.0	66.6	27.8
Quesillo (achiclado)	45.2	54.8	43.4	52.2
Beverages				
Horchata	32.5	61.0	22.4	61.8
Cebada	28.6	46.4	29.0	58.1
Chilate	26.8	58.5	20.0	65.0
Atol chuco	27.5	57.5	27.3	68.2
Atol de elote	17.7	64.7	40.0	53.3

Note: Percentage may exceed 100 because of multiple sources. Percentages are based on the number of households that consumed an item. Number of observations = 203.

licated that it is very important that Salvadoran products are made in El Salvador (Table 10).

Discussion

Although there are no demographic data available for Salvadoran people living in the United States, there is information about Central Americans and Hispanics that can be used for comparison with some of the results from our survey. This comparison should be qualified, however, by recognizing the diversity among Hispanic groups—Hispanics come from more than 20 different countries. However, research on Hispanic consumers indicates that they share certain values, beliefs, and attitudes (Wagner and Soberon-Ferrer 1990). This study collected original market and demographic data about Salvadoran residents in Los Angeles and Houston. The survey results indicated that these Hispanic consumers have a relatively strong preference for Salvadoran and ethnic foods. The sample respondents mainly had low incomes and large families with children living at home. The largest proportion of the respondents had not received a high school diploma and had two family members earning a salary.

The most popular Salvadoran foods in each of the six food categories were tortilla flour, red beans, *loroco*, *semita*, *queso duro*, and *horchata*. In general, Salvadoran people have a positive attitude toward their ethnic foods. Respondents indicated they did not consume Salvadoran foods because many foods were not available in the market, some were of poor quality, and many were expensive. Lack of availability of foods occurred more often in the Houston sample. In general, the data suggest that the consumption of Salvadoran foods will increase if their availability is increased. Other products with a high import potential include Salvadoran

fresh vegetables and fruits. Because the respondents showed a preference for purchasing Salvadoran foods in Hispanic retail stores, it is likely that for this sample the best channel for commercialization of Salvadoran foods is in Hispanic markets. For those with Internet access, electronic markets (e-commerce) provide a marketing channel for Salvadoran products. There are several companies commercializing Salvadoran food products online.

The Hispanic market is growing rapidly, both from immigration and from relatively high birth rates. The growth in ethnic food consumption has spurred a number of large corporations (e.g., Kellogg's and General Mills) to broaden their product mix. This study explores one segment of this market, the Salvadoran food market for the Salvadoran community. The results indicate that staple foods (beans and corn products) are consumed widely by Salvadorans and that there is opportunity for introduction and growth in meeting consumer demand for specialty products.

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Table 10. Importance that Salvadoran Foods are Made in El Salvador (%).

Response choice	Whole Sample (N=203)	Los Angeles Sample (N=100)	Houston Sample (N=103)
Very important	88.7	83.0	94.2
Somewhat important	4.4	7.0	1.9
Not important	4.9	6.0	3.9
No response	2.0	4.0	1.0

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Appendix**Salvadoran Food Description.**

Food Category	Food Description
Corn products	
Tortilla flour	Corn flour mainly used in the preparation of tortillas, tamales, and pupusas (corn tortilla stuffed with cheese, loroco, beans, and pork).
Tamal enlatado	Canned tamale made of corn flour and stuffed with chicken or pork.
Bean products	
Red beans	Dry red beans.
Canned beans	Canned red or black beans.
White beans	Smaller variety of navy beans.
Processed vegetables and fruits	
Loroco	Vegetable used in soups and pupusas.
Chipilin	Vegetable used in soups, rice, and pork.
Hoja de mora	Vegetable used in soups.
Verdolaga	Vegetable used in soups and salads.
Flor de izote	Flowers from a bush similar to yucca used as a side dish.
Pito	Flowers from a tree used in soups and side dishes.
Semilla paterna	Seeds from a Salvadoran fruit.
Bread and candy	
Semita	Bread made of wheat flour, eggs, molasses, and preserved pineapple.
Quesadilla de queso	Bread made of rice flour, cheese, sugar, and spices.
Torta de yema	Bread made of wheat flour, yeast, egg yolks, sugar, and spices.
Salpor	Bread made of wheat flour, sugar, and spices.
Dulce de mazapan	Candy made of sugar and spices.
Quiebra dientes	Candy made of molasses, sesame seeds, peanuts, and spices.
Conserva de coco	Candy made of coconut and sugar.
Dulce de panela	Candy derivative from sugar cane processing.
Cheese	
Queso duro	Hard, sharply flavored white cheese.
Queso duro-blando	Hard, mild flavored white cheese.
Queso capita	Hard, mild flavored layered cheese.
Queso morolique	Hard, dry cultured cheese.
Quesillo (achiclado)	Soft, white, fresh, mozzarella-type cheese.
Beverages	
Horchata	Cold drink made of rice, other seeds, and spices.
Cebada	Cold drink made of corn flour and spices.
Chilate	Hot drink made of corn flour, ginger, and spices.
Atol chuco	Hot drink made of dry blue corn and spices.
Atol de elote	Hot drink made of fresh corn, milk, and spices.